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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,990

02/10/2006

Andrew D. Greentree

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32116

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03/13/2008

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER  
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EXAMINER

HUYNH, ANDY

ART UNIT

PAPER NUMBER

2818

MAIL DATE

DELIVERY MODE

03/13/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,990	<b>Applicant(s)</b> GREENTREE ET AL.	
	<b>Examiner</b> ANDY HUYNH	<b>Art Unit</b> 2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

This is responsive to the Amendment A of December 17, 2007. In view of the Amendment, Claim 1 has been amended. Claims 26-41 have been canceled. Claims 1-25 are currently pending in the application.

### ***Response to Arguments***

Applicant's arguments, filed December 17, 2007, with respect to the rejection of the previous Office action have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection of Claims 1-25 is made as follow.

### ***Claim Objections***

Claims 2-25 are objected to because of the following reasons.

In Claims 2-25, "A system" should read –The closed three-site quantum particle system--.

In Claim 4, "claim, 2 or 3" should read –claim 1, 2 or 3—as original claim.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2818

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims **1-25** are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim **1** recites the limitations “... a first site in which the energy ...; a second site in which the energy ...; and, a third site in which the energy ..., and where the state in the third site ... to the first and second states, ... the populations of the first and second state, ...” there are insufficient antecedent basis for this limitations in the claim. Also, Claim **1** recites the limitations “the energy, the first and second states, the state, and the populations” which are not clearly defined in the claim.

Claim **2** recites the limitation “the two sites” is vague which is not clearly defined in the claim. What are the two sites, the first and second sites, the first and third sites, or the second and third sites?

Claim **5** recites the limitations “wherein the different between the probe energy and the qubit, ... the probe ...” there are insufficient antecedent basis for this limitations in the preceding claims.

Claims **6 and 17** recite the limitation “the AFP trajectory” there is insufficient antecedent basis for this limitation in the preceding claims.

Claims **8 and 19** recite the limitation “the voltage” there is insufficient antecedent basis for this limitation in the preceding claims.

Claims **10 and 21** recite the limitations “wherein the electrometer ... the charge ...” there are insufficient antecedent basis for this limitations in the preceding claims.

Claim **14** recites the limitation “wherein the relative spins of the first and second sites ...” there is insufficient antecedent basis for this limitation in the preceding claims.

Claim **16** recites the limitations “wherein the different between the probe energy and the qubit, ... the probe and the reference states ...” there are insufficient antecedent basis for this limitations in the preceding claims.

Claims **3, 4, 7, 9, 11-13, 15, 18, 20 and 22-25** are rejected for incorporating the defects of the parent claims.

### ***Conclusion***

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Huynh, (571) 272-1781. The examiner can normally be reached on Monday-Friday from 6:30 AM to 3:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Steven Loke can be reached on (571) 272-1657. The Fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the -status of this application or proceeding should be directed to the receptionist whose phone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Andy Huynh/  
Primary Examiner, Art Unit 2818